

09/682,890

Amdt. Dated Mar. 12, 2004

Response to Off. Act. Dated Dec. 12, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1(Currently Amended). A golf ball having reduced susceptibility of cracking of a cover, the golf ball produced in accordance with the method comprising:

forming a golf ball precursor product having a first volume, the golf ball precursor product comprising a core and a boundary layer, the core comprising a polybutadiene material, the core having a diameter ranging from 1.35 inches to 1.64 inches, the core having a mass ranging from 32 grams to 40 grams, the core having a PGA compression ranging from 55 to 70, the boundary layer comprising a blend of ionomer materials, the boundary layer having a thickness ranging from 0.025 inch to 0.075 inch;

heating the golf ball precursor product at a predetermined temperature ranging from 120°F to 175°F and for at least one hour a predetermined time period to achieve a predetermined volumetric thermal expansion of the golf ball precursor product of at least 1.2%, the golf ball precursor product increasing from the first volume to a heated volume; and

applying a cover over the golf ball precursor product with the heated volume, the cover applied through an exothermic reaction, the cover comprising a thermoset material with a resin selected from the group consisting of diallyl phthalates and diallyl isophthalates.

2-9 (Canceled).

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10 (Currently Amended). A golf ball having reduced susceptibility of cracking of a cover, the golf ball produced in accordance with the method comprising:

forming a core ~~comprising~~ comprised of a polybutadiene material, the core having a diameter ranging from 1.35 inches to 1.64 inches, a mass ranging from 32 grams to 40 grams, and a PGA compression ranging from 55 to 70;

forming a boundary layer over the core, the boundary layer composed of a blend of ionomer materials, the boundary layer having a thickness ranging from 0.025 inch to 0.075 inch, the boundary layer and core having a first volume;

microwave heating the boundary layer and core at a power of 700 Watts for two minutes predetermined temperature and for a predetermined time period to achieve at least a 1.2% a predetermined volumetric thermal expansion of the boundary layer and core to a heated volume; and

casting a polyurethane cover over the golf ball precursor product with the heated volume, the polyurethane cover applied through an exothermic reaction;

wherein the golf ball has a PGA compression ranging from 103 to 110.

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11 (Currently Amended). A golf ball having reduced susceptibility of cracking of a cover, the golf ball produced in accordance with the method comprising:

compression molding a core ~~comprising composed of~~ a polybutadiene material, the core having a diameter ranging from 1.35 inches to 1.64 inches, a mass ranging from 32 grams to 40 grams, and a PGA compression ranging from 55 to 70;

injection molding a boundary layer composed of an ionomer blend material around the core to form a golf ball precursor product, the boundary layer having a thickness ranging from 0.025 inch to 0.075 inch, the golf ball precursor product having a diameter ranging from 1.630 ~~inches inch~~ to 1.644 ~~inch inches~~;

heating the golf ball precursor product to cause volumetric thermal expansion of the golf ball precursor product to create a thermally expanded golf ball precursor product having at least a 1.29% volume increase of the golf ball precursor product; and

applying a thermosetting polyurethane cover to the thermally expanded golf ball precursor product through an exothermic reaction involving a polyurethane prepolymer and a curing agent;

wherein the golf ball has a PGA compression ranging from 103 to 110.

12 (Canceled).